MODIS Technical Team Meeting
June 13, 2002
Building 33, Room E125

Vince Salomonson chaired the meeting. Present were Dorothy Hall, Shaida Johnston, Steve Kempler, Jack Xiong, Bill Barnes, Eric Vermote, Wayne Esaias, Chris Justice, Skip Reber, Ed Masuoka, Robert Wolfe, and Barbara Conboy, with Yolanda Harvey taking the notes.

1.0 Upcoming Meetings

- IGARSS 2002, June 24-28, 2002 in Toronto (abstract deadline past)
- MODIS Outreach Workshop on MODIS Vegetation Variables (VI/LAI/FPAR/NPP), July 15-19th 2002, University of Montana, Missoula, MT
- MODIS Science Team Meeting, July 22-24, 2002, Greenbelt Marriott, MD
- Remote Sensing of the Earth's Environment from Terra, a workshop at the International Summer School on Atmospheric and Oceanic Sciences, August 25-30, 2002, L'Aquila Italy
- 34TH COSPAR Scientific Assembly, October 10-19, 2002, in Houston, TX, (abstract deadline past)
- MODIS Outreach Workshop on Land Surface Radiation Products, October 24-25, 2002, Boston

2.0 Meeting Minutes

2.1 General Comments

Salomonson introduced a draft of the Science Team Meeting Agenda. He pointed out that Sarah Graves has been scheduled to attend and give a short presentation on the UAH (University of Alabama at Huntsville) subsetting tool that has been installed at the DAACs and is going through a period of testing. This tool allows users to order subsets of a MODIS data product through the EDG (EOS Data Gateway). He continued that he would like some people from DAAC and ECS to report on their efforts to deliver products including whatever capabilities for subsetting MODIS products exist at the DAACs. Ultimately he would like representative users to describe their experiences when attempting to order data products. Salomonson perceives that there are too many people that say the data are very good but too hard to use/get a hold of. Kempler requested a list of questions to try to get answers to at IGARRS02 while he talks to people. Justice said that he thinks it would be good to talk to people, question them about the data, see what they really want, and where any problems lie.

Barnes expressed a concern about the MCST meeting being at the same time as the discipline meetings, and that consequently, no one would attend. Justice suggested shortening the discipline meetings so that people would have time to go to the MCST meeting if they want to. Salomonson said that sounded like a good idea, but he would have to check with each of the disciplines and get their agreement. Barnes said that Justice's idea sounded good to him as well. Salomonson then suggested that MCST have an hour-or-two meeting in the morning giving an overview that the audience would be able to think about

during everything else, and Barnes replied that that was a good idea too. He continued that if they needed to, they could also have another meeting in the afternoon for detailed discussions of items they didn't get to in the morning.

Salomonson said that the timeline for the "re-compete" appears to be slipping, but he doesn't have definitive information. Hopefully HQ can provide a definitive update at the Science Team meeting.

Justice asked Salomonson if anyone has addressed the progress in meeting the metrics that NASA Headquarters gave to OMB (Office of Management and Budget), and Salomonson replied that SeaWiFS is working on a merged SeaWiFS/MODIS data set. Justice asked what the status is of a review team to examine distribution from the EOSDIS Core System to the user community, and Kempler said that he hasn't heard anything yet, but he has a white paper coming out soon. His team went step by step through the system, changed problems as they came across them, and the result, he said, was measurable improvement.

2.2 Instruments

Barnes showed a couple of transparencies illustrating the dead detectors on Aqua's Band 6. He pointed out that they have lost four more detectors on Band 6, and are now down to only nine working detectors. As for Band 5, there is only one dead detector, which they knew of before launch. Barnes then showed a second graph that illustrated where the detectors died out by temperature. The temperature is currently at 83 K, and nine detectors are working on Band 6. The ST could possibly use Band 7 as a surrogate to calibrate Band 6.

Barnes reported that as for Terra, on June 11 there were 40 million cumulative formatter events. The number increased dramatically on May 24, and there are up to about 3.6 million /day as of today. He thinks that the formatter won't be able to keep up after about 100 to 400 million events per day. They will install a patch that may temporarily decrease the rate of events [done on 6/18 with no improvement] and then wait until the rate gets a little higher before switching to the B-side formatter. The problem is that a signal line was terminated improperly and pulses are bouncing back and forth causing an error signal. The root problem could be that the components are aging. Ultimately, he thinks that we are going to lose the A-side formatter and have to go to the B-side formatter. However, this change should not impact the science data. This will leave them with one formatter and one power supply working. Esaias and Vermote wanted to know whether the error is occurring internal or external to the formatter, as that may provide them a clue to why this problem is occurring. Barnes said that he would try to find out.

Xiong reported that there is no difference in the data from a month ago. Esaias asked if they should expect to see any change in the data if they have to change formatters. Barnes replied that they might want to switch formatters on Terra before the door is opened on Aqua, if the rate keeps going up (which it has). Salomonson asked if they switch formatters, will they have a separate collection 4 from the one before the switch, but Esaias said that no, it will simply be a numbering issue. Ultimately the data will be reprocessed anyway.

Barnes reported that in all other respects, the Aqua and Terra MODIS instruments are doing fine.

Salomonson reported that Roger Drake is against the demo burn because it may cause more problems in Band 6 if the space-view door needs to be closed and the cooler warms up. Barnes replied that the burn isn't until July. The problem is that MODIS is losing Band 6 detectors every thermal cycle. Salomonson said that they may want to delay the inclination test burn, and it also appears that they are going to do the deep space maneuver around the 4th of July.

Esaias asked Justice about AIRS. Salomonson said that AIRS and AMSR are looking good. The problem in the case of AMSR was with the Automatic Gain Control, but he thinks it has been fixed.

2.3 DAAC

Kempler reported that they are going to have their weekly maintenance time, so the DAAC will be down for about 19 hours, but they will recover and are on target. The backlog has been about 24 hours. Oceans reprocessing will start on Saturday June 15. They've sent out the newest data pool allotments, and he's sent Esaias the rationale for the numbers. PGE3.2.1 is in and running. Also, a reporter from Huntsville, Alabama came through, so Kempler showed him the DAAC. The X-rate has been up – they've been seeing up to 3Xs and 4Xs when things are going well. As for reprocessing L1B, it should go well, but they still have to count in Aqua (and Gary has the numbers for that). Salomonson reported for Masuoka that they will reprocess all of L1B and Cloud Mask in eight months.

2.4 Oceans

Esaias reported that the new PGEs are in operation mode. There is a problem using SeaWiFS ancillary data, so they are about ten days behind (though MODIS is only about four days behind). They are trying to find out if it is an anomaly or not. They want to be reprocessing for a couple of weeks before IGARRS. Salomonson said that Vermote, someone from Rapidfire, and Crystal Schaff are presenting on Land at IGARRS.

Esaias reported that at a meeting about integrated ocean color processing and reprocessing transition, people were very impressed by the current MODAPS processing rate. One of the transition plans from Shaida Johnston will probably go through. Johnston said there are more meetings scheduled on the subject.

2.5 Land

Justice reported that the last outreach workshop went very well. They talked mostly about mosaicing tools, but overall he thinks it went pretty well. The burden of using the Integerized Sinusoidal Grid data format for Level 3 data products is on the user and is very heavy, and the users have been giving very negative feedback about it. He doesn't want to delay the schedule for the Land, Atmosphere and Level 1 reprocessing due to start in October, but the Land Team needs to discuss this problem. Salomonson said that he doesn't want to delay

either, but they need continuity between the disciplines. He doesn't want to slow collection 4, so they are going to try to find some way to work around it. Justice said that if they are going to make a change in the Level 3 format for Land products, now is the time. He said that there are pros and cons, and they need to make a conscious decision before going to collection 5. Masuoka said that the Land Team needs to come to a decision about the Level 3 format for Land by end of June if they intend to hold to the October start date for Collection 4 reprocessing. Esaias said that MODAPS would be ready for another Oceans reprocessing in about a year, and Masuoka said that it will always take about four months for Oceans reprocessing and eight months for Land and Atmospheres to reprocess all data days from the start of the mission to the current time. Esaias said that once a year would be sufficient since the Science Team will need time to look at the data products and make changes to their PGEs for the next reprocessing. Justice said that he is seeing a lot of interest in MODIS, and that at least half of the requests are of international origin. It is a mix of direct broadcast and other users. He reported that MODIS data is being used in Brazil for sending out teams in field for fires. MODIS data was also used for the large Alaska fires. In short, MODIS is getting a lot of good publicity. Esaias added that on Friday June 14, NOAA will turn on real time.

2.6 SDST
Masuoka reported that he has discussed with Jeff Privett eLand processing for NPP. He said there are synergies of doing NPP processing by enhancing the MODAPS software rather than starting from scratch and sharing operations staff with MODIS processing.

3.0 Action Items

3.1 New Action Items
None.

3.2 Action Items Carried Forward
3.2.1 Technical team to discuss further the issue of predicted ephemeris data and how to improve it.
Status: Open.
Ed Masuoka and Robert Wolfe plan to meet with the Terra Flight Operations Team to see if they can run definitive ephemeris 2-4 times per day. The context for this issue to provide better geolocation information for things like fire front tracking and similar issues.

3.2.2 The procedure for releasing Aqua MODIS products needs to be further refined via Discipline discussions and coordination with the Science Team leader, et al.
Status: Open.